

REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on November 24, 2004 and is being filed pursuant to a Request for Continued Examination (RCE) as provided under 37 CFR 1.114. No claims have been amended, cancelled or added. Reconsideration of this application is respectfully requested.

Claim Rejections - 35 USC § 102

Claims 1-14 stand rejected under § 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,510,497, Strongin, et al. (hereinafter "Strongin").

In regards to claim 1, the Examiner states:

Also see column 18, lines 22-35, which discusses scheduling a number of "tracked" requests based on the bus direction, or "device state." The "switch point" is when the pending requests consistent with the memory bus direction are issued, and the bus direction reverses, or switches, to allow the scheduled requests that were previously inconsistent with the previous bus direction to now issue.

(Office Action, page 3)

However, Applicant respectfully asserts that Strongin does not anticipate claim 1 under 35 U.S.C. §102(e). Claim 1 states:

1.) A method for scheduling access to a device comprising:
tracking a current state of a device;
tracking a count of a number of requests which require a particular state; and
scheduling requests to the device using the current state of the device, the count of the number of requests that have already been scheduled using the current state, a switch point indicating when to switch state, wherein after the count reaches the switch point and there are incoming requests having an alternate state to the current state of the device, switching the state of the device to process incoming requests.

(Emphasis added)

Strongin does not disclose scheduling requests to the device using... a switch point indicating when to switch state. Strongin discloses:

14. A method, comprising:
tracking system memory status including which one or more memory pages are currently open;
monitoring pending memory access requests; and
scheduling the pending memory access requests for execution dependent upon the system memory status and memory bus direction, wherein said scheduling comprises scheduling one or more of the pending memory access requests directed to a currently open memory page and consistent with a current memory bus direction ahead of one or more pending memory access requests directed to a currently closed memory page or inconsistent with the current memory bus direction.

(Col. 18, lines 22-35)

Strongin is disclosing the scheduling of memory access requests based on the system memory status and memory bus direction. This is not the same as scheduling requests using a switch point indicating when to switch state, wherein after the count reaches the switch point... switching the state of the device. In fact, Strongin does not discuss a switch point or the counting of requests at all. Scheduling requests based on system memory status and bus direction does not represent a switch point. Further, the Examiner states that a switch point is represented by, "pending requests consistent with the memory bus direction are issued, and the bus direction reverses, or switches, to allow the scheduled requests that were previously inconsistent with the previous bus direction to now issue." This language does not disclose a switch point. Instead it indicates that the direction (state) of the bus is changing at will, and not because of a switch point. The above language in Strongin discloses that the direction of the bus will

change to allow the scheduled requests to now issue, and not because of a switch point.

Applicant respectfully asserts that Strongin does not disclose, scheduling requests to the device using the current state of the device, the count of the number of requests that have already been scheduled using the current state, a switch point indicating when to switch state, wherein after the count reaches the switch point and there are incoming requests having an alternate state to the current state of the device, switching the state of the device to process incoming requests. Therefore, Strongin does not disclose or suggest all the limitations stated in claim 1. Thus, Strongin does not anticipate claim 1 under 35 U.S.C. §102(e).

Claims 2-5 depend upon and include the limitations of claim 1. Therefore claims 2-5 are also not anticipated by Strongin under 35 U.S.C. §102(e).

In regards to independent claim 6, the Examiner states:

Logic configured to switch the direction of the bus to process incoming requests wherein after the count reaches the switch point and there are incoming requests having the direction opposite to the current direction of the device bus, switching the direction of the device bus is disclosed in column 18, lines 22-35, which discloses issuing the requests consistent with a bus direction ahead of, or before, the requests inconsistent with the bus direction.

(Office action, page 5, paragraph 3)

However, Applicant respectfully asserts that Strongin does not anticipate claim 6 under 35 U.S.C. §102(e) for the same reasons as listed above. Claim 6 states:

6. A bus scheduler comprising:
an input configured to receive at least one incoming request, each request indicating a bus direction;
a switch point;

an indicator of a current bus direction;
a count of requests processed using the current bus direction; and
logic configured to switch the direction of the bus to process incoming requests wherein after the count reaches the switch point and there are incoming requests having the direction opposite to the current direction of the device bus, switching the direction of the device bus.

(Emphasis added)

Strongin does not disclose to process incoming requests wherein after the count reaches the switch point... switching the direction of the device bus. As stated above, Strongin discloses the scheduling of memory access requests based on the system memory status and memory bus direction. This is not the same as using a switch point indicating when to switch the direction of a device bus. In fact, Strongin does not discuss a switch point at all. Scheduling requests based on system memory status and bus direction does not represent a switch point. Further, the Examiner states that a switch point is represented by, "pending requests consistent with the memory bus direction are issued, and the bus direction reverses, or switches, to allow the scheduled requests that were previously inconsistent with the previous bus direction to now issue." This language does not disclose a switch point. Instead it indicates that the direction (state) of the bus is changing at will, and not because of a switch point threshold being met. The above language discloses that the direction of the bus will change to allow the scheduled requests to now issue, and not because of a switch point.

Applicant respectfully asserts that Strongin does not disclose, logic configured to switch the direction of the bus to process incoming requests wherein after the count reaches the switch point and there are incoming requests having the direction opposite to the current direction of the device bus, switching the direction of the device bus.

Therefore, Strongin does not disclose or suggest all the limitations stated in claim 6.

Thus, Strongin does not anticipate claim 6 under 35 U.S.C. §102(e).

Claim 7 depends upon and includes the limitations of claim 6. Therefore claim 7 is also not anticipated by Strongin under 35 U.S.C. §102(e).

In regards to independent claim 8, the Examiner states:

Logic configured to determine an updated device state using the switch point and count such that when the count crosses a threshold of the switch point, the device state is changed is disclosed in column 18, lines 22-35, where memory accesses are scheduled based on the bus direction and the page status.

Office action, page 6, paragraph 1)

However, Applicant respectfully asserts that Strongin does not anticipate claim 8 under 35 U.S.C. §102(e) for the same reasons as listed above. Claim 8 states:

8. A scheduler comprising:
 - a switch point;
 - a current device state;
 - a count;
 - logic configured to determine an updated device state using the switch point and count such that when the count crosses a threshold of the switch point, the device state is changed; and
 - scheduling access requests to the device using the updated device state.

(Emphasis added)

Strongin does not disclose to determine an updated device state using the switch point and count such that when the count crosses a threshold of the switch point, the device state is changed. As stated above, Strongin discloses the scheduling of memory access requests based on the system memory status and memory bus direction. This is not the same as using a count that crosses the switch point threshold. In fact, Strongin does not discuss a switch point at all. Scheduling requests based on system memory

status and bus direction does not represent a switch point. Further, the Examiner states that a switch point is represented by, "pending requests consistent with the memory bus direction are issued, and the bus direction reverses, or switches, to allow the scheduled requests that were previously inconsistent with the previous bus direction to now issue." This language does not disclose a switch point. Instead it indicates that the direction (state) of the bus is changing at will, and not because of a switch point threshold being met. The above language discloses that the direction of the bus will change to allow the scheduled requests to now issue, and not because of a switch point.

Applicant respectfully asserts that Strongin does not disclose, logic configured to determine an updated device state using the switch point and count such that when the count crosses a threshold of the switch point, the device state is changed. Therefore, Strongin does not disclose or suggest all the limitations stated in claim 8. Thus, Strongin does not anticipate claim 8 under 35 U.S.C. §102(e).

Claims 9-14 depend upon and include the limitations of claim 8. Therefore claims 9-14 are also not anticipated by Strongin under 35 U.S.C. §102(e).

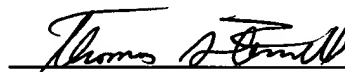
Conclusion

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections and objections have been overcome. Applicants reserve all rights with respect to the application of the doctrine equivalents. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Thomas S. Ferrill
Reg. No. 42,532
Tel.: (408) 720-8300

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026